

V. *A description of a process, by which corn tainted with Must may be completely purified.* By Charles Hatchett, Esq. F. R. S. In a Letter addressed to the Right Honourable Sir Joseph Banks, Bart. G. C. B. P. R. S. &c. &c.

Read December 5, 1816.

MY DEAR SIR,

THE very great loss which this country formerly experienced by a considerable part of imported grain having become contaminated by Must, induced me, several years past, to direct my attention towards discovering some simple and economical method by which this taint could be removed, and you well know that my endeavours were successful; but as circumstances at that time, and since, did not appear to require that great publicity should be given to this process, I contented myself with describing it to you and a few of my other friends. Now, however, when I reflect on the large quantities of corn which, during the last harvest, have been housed in a damp state, and on the great importations which are expected, with the extreme probability that a considerable part may have contracted Must, and that thus the object of importation may be partially frustrated by the destruction of a large portion of grain, and the consequent increase in the price of the remainder, I think it incumbent on me, by addressing this Letter to you, to lose no time in publishing a process, by which corn, however musty, may be completely

purified, with scarcely any loss of quantity, with very little expense, and without requiring previous chemical knowledge or chemical apparatus.

The experiments which I made, were confined to wheat, as being of the greatest importance ; but there can be no doubt that oats and other grain may be restored to sweetness with equal success ; and I have also additional satisfaction from being enabled to state, that the efficacy of the process may be ascertained by any person, in any place, and upon any quantity of grain, however small.

From my experiments I am inclined to believe, that Must is a taint produced by damp upon the amylaceous part of the grain or starch ; that the portion of starch nearest to the husk is that which is first tainted ; and that the greater or less degree of Must is in proportion to the taint having penetrated more or less into the substance of the grain. In most cases, however, the taint is only superficial ; but nevertheless, if not removed, it is sufficient to contaminate the odour and flavour of the whole, especially when converted into flour.

After various experiments, I found the following method to be attended with success.

The wheat must be put into any convenient vessel capable of containing at least three times the quantity, and the vessel must be subsequently filled with boiling water ; the grain should then be occasionally stirred, and the hollow and decayed grains (which will float) may be removed ; when the water has become cold, or in general when about half an hour has elapsed, it is to be drawn off. It will be proper then to rinse the corn with cold water, in order to remove any portion of the water which had taken up the Must ; after which the

corn being completely drained, is without loss of time to be thinly spread on the floor of a kiln, and thoroughly dried, care being taken to stir and to turn it frequently during this part of the process.

This is all that is required; and I have constantly found that even the most musty corn (on which ordinary kiln drying had been tried without effect) thus became completely purified, whilst the diminution of weight caused by the solution of the tainted part was very inconsiderable.

I have the honour to remain,

Dear Sir Joseph,

your most faithful and obedient Servant,

CHARLES HATCHETT.

Mount Clare, Roehampton,

Dec. 4, 1816.